New Brunswick Automobile Insurance Review

Report Prepared for the New Brunswick Office of the Attorney General

June 25, 2004

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June 25, 2004

Honourable Bradley Green, QC
Minister of Justice and Attorney General
Department of Justice and Attorney General
PO Box 6000
Fredericton, New Brunswick
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Dear Minister Green:

New Brunswick Automobile Insurance Review

We are pleased to present our report summarizing our review and analysis of the Final Report on Public Automobile Insurance in New Brunswick of April 2004 issued by the Select Committee on Public Automobile Insurance (the "Select Committee Report").

Our report comments upon the implications of the proposed public automobile insurance model recommended in the Select Committee Report, explores alternative automobile insurance delivery models for New Brunswick, and provides an alternative example of automobile insurance coverage given the Province's principles and objectives for automobile insurance in New Brunswick.

We thank you for the opportunity to assist you in this review.

Yours truly,

PricewaterhouseCoopers

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Executive Summary

PricewaterhouseCoopers LLP ("PwC") was retained by the Office of the Attorney General ("AG") to assist it in reviewing and analyzing the Final Report on Public Automobile Insurance in New Brunswick in April 2004 issued by the Select Committee on Public Automobile Insurance (the "Select Committee Report") and the recommendations contained therein, and to explore the potential implications of alternative automobile insurance options for New Brunswick. More specifically, PwC was retained to:

- Review and comment upon the implications of the proposed public automobile insurance model recommended in the Select Committee Report, including the reasonableness and sustainability of the assumptions underlying the proposed public automobile insurance model.

- Explore and assess alternative automobile insurance delivery models that the Government should consider for the Province of New Brunswick; and

- Provide alternative examples of automobile insurance product coverage and estimated average premium pricing given the Province's principles and objectives for automobile insurance in New Brunswick.

We understand that the results of our review will be used by the AG to assist it in providing advice to the Government regarding a course of action the Government should take with respect to automobile insurance in New Brunswick. Our report is subject to the limitations and qualifications outlined in Appendix A.

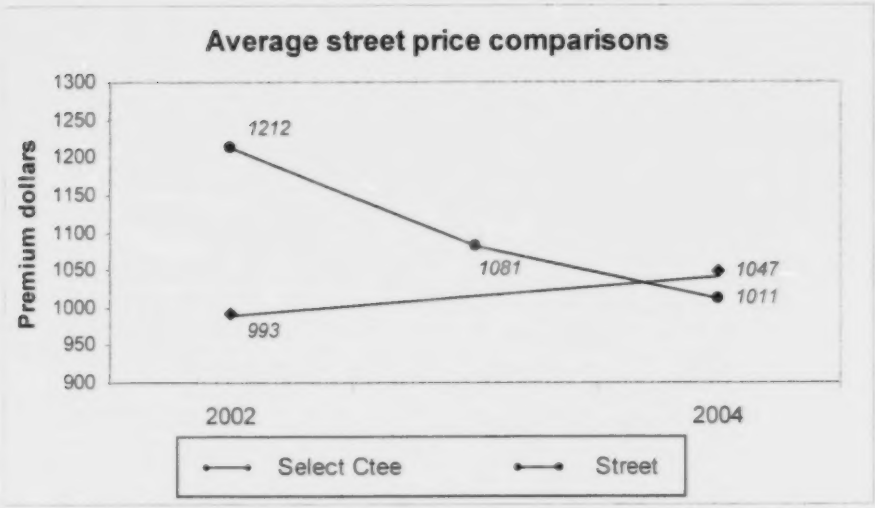
Our analysis provides the basis for conclusions in two principle areas:

- The Select Committee Report; and
- A potential alternative automobile insurance model addressing product delivery, design and pricing, reflecting the Government's key principles and objectives for automobile insurance.

Select Committee Report

Our review and analysis of the Select Committee proposal to establish its recommended public insurance model (New Brunswick Public Insurance or "NBPI") raises several significant concerns:

a) The average premium price cited in the Select Committee Report, when trended for claims inflation, is higher than the estimated current "New Brunswick street price", as illustrated below:



b) There is a significant probability that the average premium will be higher than that cited in the Select Committee Report:

- Claims costs – the dominant cost underlying the premium – may vary significantly from those cited in the Select Committee Report;
- Operating costs will likely be moderately higher; and
- Additional costs associated with start-up, pre-operating expenses, and initial capitalization (see below) will either add to the indicated premium or would require a subsidy by the Government of New Brunswick.

c) Required funding for start-up, pre-operating expenses, and initial capitalization will likely be greater in magnitude and duration than indicated in the Select Committee Report:

- There is a significant probability that costs for start-up and pre-operating expenses will be greater than indicated in the Select Committee Report;
- Total initial capitalization would likely range between $120-190 million in order to promote rate stabilization and avoid a potential deficit (attributable to the Government of New Brunswick). This capital would not be fully repaid to the Government in the year following implementation of the New Brunswick Public Insurance model (ie. in Year 2), as was proposed in the Select Committee Report; and
- It is not prudent to repay the Government's debt, as proposed in the Select Committee Report, in Year 2.

d) Risks associated with implementing the Select Committee model are significant:

- Implementation of the Select Committee model would be a complex undertaking with many potential areas for unfavourable variations from planned implementation timing and cost;
- The proposed implementation timetable of one year is aggressive; if it is not achieved, New Brunswick drivers could potentially be left without readily available insurance since private insurers may not be in a position or be willing to provide coverage beyond the one-year implementation timeline;
- NBPI, as an insurer likely to be perceived by drivers to be Government-controlled, would likely be under great pressure to underprice the product; with its poor initial capitalization, it will not have the financial resources to provide this without putting the Government of New Brunswick at further risk; and
- The Select Committee Report refers to potential international trade implications under NAFTA, GATT, and WTO agreements. The negative impact that these agreements may have on the attractiveness of the Select Committee model, if any, were not investigated as part of our assignment.

e) In our view, the methodology used to support the Select Committee Report recommendations is not sufficient to be used as a basis for wholesale automobile insurance change in the province.

Potential Alternative Automobile Insurance Model

Given our findings above, the key principles and objectives of the Government of New Brunswick may be better achieved, on a less risky basis, by implementing an alternative model. This model, which represents an enhancement of the existing automobile insurance model in New Brunswick, would feature:

- Automobile insurance provided by private insurers operating under a new and enhanced regulatory framework, characterized by:
  - A system-wide stewardship mandate;
  - A focus on insurance only;
  - Enhanced analysis and reporting of claims cost trends;
  - An emphasis on rate stability and avoidance of rate "spikes"; and
  - Introduction of a Consumer Advocate to protect consumer interests.

- A new insurance product framework featuring:
  - Two insurance products: the "basic" product (with pricing levels consistent with current pricing levels), and the introduction of a lower-cost "no-frills" product; and

- Increased driver choice regarding coverage and premium cost based upon the introduction of "direct compensation" for property damage claims.

Our detailed review and analysis of the Select Committee Report and potential alternative automobile insurance models supporting our findings and conclusions above are contained in our report.

New Brunswick Automobile Insurance Review

Table of Contents

Page

Executive Summary ..... **i**
- Select Committee Report i
- Potential Alternative Automobile Insurance Model iii

1 Background **1**
- 1.1 Introduction 1
- 1.2 Our Mandate 1
- 1.3 Limitations and Qualifications 2

2 Principles and Objectives **3**
- 2.1 Basic Principles 3
- 2.2 Objectives and Preferences 3

3 Review and Analysis of the Select Committee Report **5**
- 3.1 Overview 5
- 3.2 Comparative Premium Cost 5
- 3.3 Delivery Model Review 6
  - 3.3.1 Operational Scenarios 7
  - 3.3.2 Claims Experience Iterations 8
  - 3.3.3 Benchmarks of Financial Health 10
  - 3.3.4 Summary of Results 11
  - 3.3.5 Summary of Analysis – Select Committee Delivery Model 12
- 3.4 Review of Select Committee Proposed Product and Pricing 13
  - 3.4.1 Overall Product Characteristics 13
  - 3.4.2 Overall Product Pricing 13
  - 3.4.3 Individual rates determination 16
- 3.5 Summary of Findings 18

4 Evaluation of Alternative Delivery Models **20**
- 4.1 Principles and Objectives of New Brunswick 21
- 4.2 Delivery Models and System Costs 21
- 4.3 Individual Design Options 23
  - 4.3.1 Insurer Principal 23
  - 4.3.2 Fulfillment Services 24
  - 4.3.3 Special Pools 24
  - 4.3.4 Basis for Pricing 24

4.3.5 Regulatory Framework 24
4.3.6 Regulation of Agent Commissions 25
4.4 Representative Models: Description and Assessment 25
4.4.1 The Public Monopoly Model 26
4.4.2 The Private Insurer Model with Enhancements 28
4.5 Summary of Delivery Model Options 30

5 Alternative Product Design Options 31
5.1 Rating Structure 31
5.2 Use of Territories 31
5.3 Development of Basic and No-Frills Products 32
5.3.1 Direct Compensation 33
5.3.2 Basic Product 33
5.3.3 No Frills Product 34
5.3.4 Measuring Fault in a DC system 34

6 Conclusions 35
6.1 Select Committee Report 35
6.2 Potential Alternative Automobile Insurance Model 36

APPENDICES

A: LIMITATIONS AND QUALIFICATIONS

B: SCENARIO 3 ANALYSIS

C: DELIVERY MODEL FINANCIAL ANALYSIS

1 Background

1.1 Introduction

The Government of New Brunswick ("New Brunswick", the "Province" or the "Government") has been investigating various means of making private passenger automobile insurance more affordable, fair and accessible for New Brunswickers. As part of this investigation, the Province announced on August 5, 2003 the creation of a Select Committee on Public Automobile Insurance (the "Select Committee"). The Select Committee was asked to look at the various public sector automobile insurance systems in Canada and identify the most suitable model of public automobile insurance to ensure fair, accessible and affordable automobile insurance for all New Brunswickers in the event a decision is made to move to a public system.

The Select Committee presented its Final Report on Public Automobile Insurance in New Brunswick in April 2004 (the "Select Committee Report"). The Select Committee Report recommended a "made-in-New Brunswick" public automobile insurance model that would provide "a comprehensive and high level of no-fault automobile insurance at an affordable rate to all New Brunswickers". Under this model, every licensed driver would have access to mandatory automobile insurance coverage and could choose to augment that coverage if desired. The average premium was estimated at $993. The public automobile insurance model would be delivered through a not-for-profit Crown corporation that would operate at arm's length from the provincial government. The Province would provide $82 million in initial financing to the Crown corporation to fund its total start-up, capital and pre-operating costs; this would be repaid in full with interest after one year when written premiums would be converted from private insurance companies to the Crown corporation.

The Office of the Attorney General ("AG") has been asked to review the proposed public automobile insurance model recommended in the Select Committee Report and to provide advice to the Government respecting a course of action the Government should take with respect to automobile insurance in New Brunswick.

1.2 Our Mandate

PricewaterhouseCoopers LLP ("PwC") was retained by the AG to assist in reviewing and analyzing the Select Committee Report and the recommendations contained therein, and to explore the potential implications of alternative automobile insurance options for New Brunswick. More specifically, PwC was retained to:

- Review and comment upon the implications of the proposed public automobile insurance model recommended in the Select Committee Report, including the reasonableness and sustainability of the assumptions underlying the proposed public automobile insurance model, focusing on:
  - the public insurance model recommended;
  - the proposed start-up, capital and pre-operating costs of $82 million;

- the proposed no-fault product offering; and
- the estimated average annual premium charged to all New Brunswickers of $993.

- Explore and assess alternative automobile insurance delivery models that the Government should consider for the Province of New Brunswick; and

- Provide alternative examples of automobile insurance product coverage and estimated average premium pricing given the Province's principles and objectives for automobile insurance in New Brunswick.

1.3 Limitations and Qualifications

This report is subject to the limitations and qualifications outlined in Appendix A.

2 Principles and Objectives

Through consultation with Government of New Brunswick officials, the following principles and objectives were identified and consolidated.

2.1 Basic Principles

Based upon our discussions with Government officials, any potential reform of the automobile insurance in New Brunswick should be guided by the following key principles:

- **Affordability**: The average cost of automobile insurance in New Brunswick should not be more than New Brunswick society can afford. Moreover, a delivery model should not unreasonably price drivers "out of the market" for reasons not of their own making;
- **Accessibility**: All New Brunswick drivers must have access to automobile insurance, which is mandatory by New Brunswick law;
- **Fairness**: Drivers should bear their fair share of the overall costs of the insurance system. As insurance is a business of risk, this implies that drivers should bear costs commensurate to the risks they represent to the system overall. The tension between this interpretation and the principle of Affordability at the individual driver level was acknowledged;
- **Rate stability**: Sharp swings in premiums from year to year, when comparing the same coverage, should be avoided; and
- **Transparency**: The drivers of New Brunswick should be able to assure themselves that they are being dealt with in a fair manner by the insurance industry, and all appropriate information should be made readily accessible.

2.2 Objectives and Preferences

In addition to these basic principles, the following objectives and preferences were identified by Government officials:

- **Rate levels** should be as low as possible, commensurate with the basic principles above;
- **Government control**: Government should have the most effective and efficient control (such as regulatory oversight) possible consistent with the achievement of the basic principles in order to limit the potential financial exposure to New Brunswick taxpayers;
- **Territories**: A single-territory market should be established, if practical;
- **Cross-subsidization**: Subsidization of selected driver classes – such as new drivers – by the general driver population should be considered;

- **Absolute subsidization by Government**: Government subsidy of the insurance system on an ongoing basis should be avoided. A Government profit from a public insurance provider should not be sought;

- **Level of investment by Government**: Given the fiscal challenges faced by Provincial governments including New Brunswick, any investment by Government in the automobile insurance industry should be minimized. The potential attribution of any deficits in a Crown corporation to Government by the financial markets should be considered;

- **Competitive marketplace**: Multiple providers competing for New Brunswick drivers' business is desirable, if consistent with the basic principles;

- **Product spectrum**: Drivers should be offered a full range of insurance products. In particular, a low-cost, "no-frills" option should be made available, as well as a "standard" policy, and options to purchase additional coverages at extra cost;

- **Employment impact**: Employment in New Brunswick should not be negatively affected. A movement of New Brunswick employment from rural areas to urban areas is to be avoided; and

- **Facility Association**: A model should not require a large number of drivers to seek insurance from a Facility Association. A Facility Association should only serve the high-risk drivers for whom it was originally designed.

While acknowledging that some tension exists among these principles and objectives, any potential reform considered by the Government for the automobile insurance industry in New Brunswick should attempt to optimize the achievement of the key principles and objectives noted above. Accordingly, these key principles and objectives have formed the basis of our analysis of the proposed public automobile insurance model recommended in the Select Committee Report, and our investigation into alternative automobile insurance delivery models and examples of automobile insurance product coverage and pricing for New Brunswick.

3 Review and Analysis of the Select Committee Report

3.1 Overview

As described in Section 1, the Select Committee Report recommends a "made in New Brunswick" automobile insurance model characterized by:

- A newly established public provider, New Brunswick Public Insurance ("NBPI"). NBPI would be established at a cost to the New Brunswick Government of $82 million (to be repaid after one year) with a one-year implementation program. Private insurers would be able to offer coverage in addition to the mandatory coverage, in competition with NBPI. Distribution would be via licensed brokers and agents at a regulated commission rate; and

- A new insurance product design, characterized by:
  - A no-fault model in which compensation for pain and suffering is eliminated. Drivers need not and cannot sue to receive benefits. Fault in each incident is still determined and used as a rating factor; and
  - Rating for purposes of determining premiums to include driving record, vehicle, vehicle usage, and optional coverage purchased. Rating on factors **will not include** age, gender, marital status, territory, or premium payment history.

This section examines the assumptions underlying the Select Committee proposal, highlights the implementation considerations which would apply should New Brunswick choose to implement the Select Committee model, and comments on the risks that the results of this implementation may vary from those projected in the Select Committee Report.

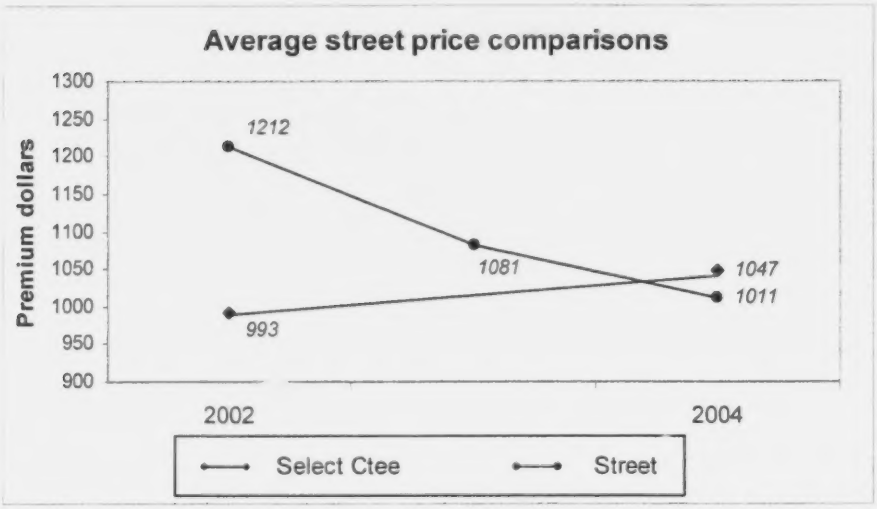
3.2 Comparative Premium Cost

A primary goal of the Select Committee model was affordable premium cost.

The Select Committee Report suggests that a premium of $993 over the forecast period would be applicable. This was based largely on an analysis of the Manitoba Public Insurance Corporation ("MPIC") model. Underlying MPIC analysis of trends, as presented in their 2004 rate application, is a yearly trend factor of 5.56% increase in claims cost. Applying this trend to reflect that the Select Committee analysis is now one year old, would produce an indicated premium of approximately $1,047[1].

A survey of New Brunswick insurance costs conducted as part of this review indicates an average street price of approximately $1,081 in December 2003 and $1,011 in July 2004. This is based on observed average premium pricing for the last half of 2003 and the first half of 2004, adjusted for recently filed rate changes filed with the New Brunswick Public Utilities Board.

[1] See pricing methodology – Section 3.4.2



This comparison indicates that the Select Committee model does not appear to offer a premium cost advantage over the existing model, even if all of its assumptions are realized on implementation. As the remainder of this section indicates, some of these assumptions are vulnerable to significant variation.

3.3 Delivery Model Review

This section of the report contains the summary of the high level financial impact analysis conducted on the assumptions used in the Select Committee Report. The purpose of the analysis is to identify areas where actual results may differ from those presented in the Select Committee Report.

We have confirmed through discussions with consultants contributing to the Select Committee Report that the model is based primarily on the experience of MPIC, with assumptions intended to be conservative. Further we understand that the scope of the Select Committee mandate to its consultants did not allow for detailed analysis of every variable affecting the financial projections.

Our analysis was conducted as follows:

- **Operational scenarios** – how the start-up and pre-operating phase of the project might unfold, and how the ongoing economics of the administration and operations may develop – were defined, the Select Committee scenario and two others as described in Section 3.2.1;
- **Claims experience cases** – how the potential for claims cost fluctuation year to year may affect the business – were defined, as described in Section 3.2.2;
- **Benchmarks of financial health** were defined, as described in Section 3.2.3; and

- **Analysis of each operational scenario and claims experience case versus the benchmarks** was conducted. The results are shown in Section 3.2.4. This analysis includes a projection of the investment of capital and debt required to meet the benchmark standards in each case.

3.3.1 Operational Scenarios

Our results are presented using three scenarios. The assumptions underlying each of the three scenarios are outlined below.

Scenario 1

This scenario reflects the Select Committee Report assumptions. The Select Committee model calls for:

- Start-up and pre-operating costs of $82 million:
  - Start-up costs of $13.3 million;
  - Property, plant and equipment investment of $35.3 million;
  - Operating costs prior to commencement of operations of $32.0 million;
  - Opening cash balance of $1.4 million;
- Transition costs during Year 2 (first year of operation) of $20 million;
- Operating costs of $50 per policy per year after commencement of operations.

Scenario 2

Scenario 2 illustrates the Select Committee Report adjusted for environmental forces on the economy. As such Scenario 2 builds on the Select Committee Report by incorporating:

- 2% inflation for expenses
- Loss trend of 5.56%
- Constant loss ratio 85.1% (as used in the Select Committee analysis)

The Accounts Payable, Accounts Receivable and Service Charges are calculated as in the Select Committee Report.

Scenario 3

Scenario 3 illustrates an "unfavourable case" scenario. While the assumptions in the Select Committee Report were intended to be conservative, upon review we have identified specific assumptions that are vulnerable to unfavourable variation. The assumptions used under Scenario 3 adjust the Select Committee Report to reflect changes to:

1. Start-up costs – including Information Technology, Consulting and Operational as a result of delayed start up.

2. Ongoing operational costs – related to the fixed costs in the context of potentially poorer scale economies compared to Manitoba.

As a result of increasing the total start-up costs, in Scenario 3 an additional $26 million (total $108 million) will be required during the start up period to ensure that there is adequate cash to reach start-up. Details of the analysis underlying these conclusions are found in Appendix B.

It is important to note that Scenario 3 does not represent the highest possible cost, as complex projects of this type may experience even greater cost and time over-runs.

3.3.2 Claims Experience Iterations

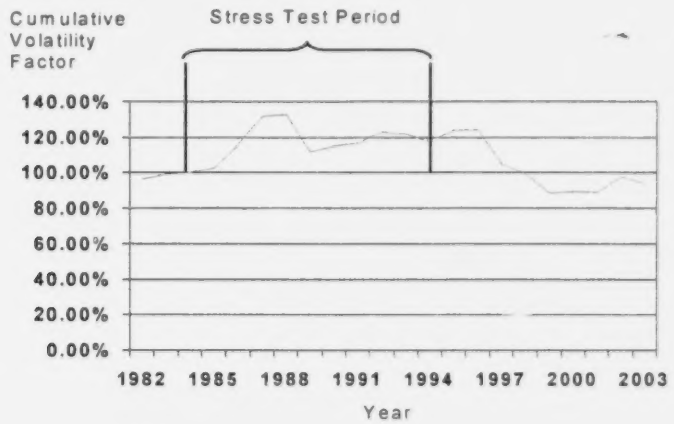
The analysis in the Select Committee Report assumes that claims experience is constant year to year – a loss ratio of 85.1% is experienced every year. However, claims experience in automobile insurance can be volatile, particularly in smaller markets such as New Brunswick. Two alternative claims cost experience iterations were explored as described below.

Fluctuating Claim Cost Experience – the "a" Iteration

In constructing the "a" claims experience iteration, we have referred to the actual experience of Manitoba Public Insurance Corporation claim costs over a twenty-year period starting in 1982. The claims cost experience per policy was separated into the long term trend over that period, and the fluctuation from the long term trend. This fluctuation was used in the analysis as described below.

As a stress test, we selected the 10-year period in which the fluctuation from the long term trend was most unfavourable – the "worst" time to start a 10-year initial experience with a public insurance company.

The following diagram illustrates the claim loss trend that is applied in the "a" iterations.



Source: Manitoba Public Insurance Corporation

A flat line at 100% would represent claims cost experience equal to the long term trend – this is the assumption implicit in the Select Committee Report. Experience is unfavourable to the extent that the experience line is above 100%.

For modeling purposes, the fluctuation from trend shown above were added to the trend incorporated into the applicable scenarios – 0% for Scenario 1 and 5.56% for Scenarios 2 and 3 as discussed above.

In this "a" iteration, it is assumed that NBPI elects to increase premiums only at the rate of the long term trend, without reacting to unfavourable experience as it unfolds. This is a harsh assumption as shown in Section 3.2.4, so a moderated "b" iteration was developed as described below.

Fluctuating Claims Cost Experience with Management Intervention – The "b" Iteration

The "a" iteration assumes that NBPI management would resist above-trend increases in premiums in light of sustained unfavourable claims experience. In practice, NBPI management would likely react to mitigate the negative effects of this experience.

The "b" iteration examines the case in which management of the public insurance corporation intervenes in the premium stabilization policy and institutes an increase starting at the end of the second year of operations. This time frame is selected as it allows for one and a half years of negative claim history before management has a chance to react to the actual experience. The rate adjustment would be filed in the middle of the second year of operation to take effect at the end of that year. The new rates would be in effect for all of the third year of operation (Year 4 in the Select Committee projections; Year 1 is the pre-operating year).

We have assumed that starting in Year 4 there will be a 15% rate level change on top of the trend-line rate level change to achieve the loss ratio assumed in the Select Committee Report. Similarly, in Year 8 we have assumed a 10% rate level change in addition to the trend-line rate level change to achieve the target loss ratio.

Other Claims Cost Fluctuation Iterations

To further explore the potential vulnerability of the NBPI model to fluctuations in claims experience, and the initial capitalization required to provide financial stability in the face of this potential fluctuation, the following additional analyses were performed:

- Iteration "c", in which New Brunswick data was substituted for MPIC data in a "fluctuating claims with no management reaction" case analogous to iteration "a". While this data is relevant as it is native to New Brunswick, it should be interpreted with caution as it is for a fundamentally different insurance product;
- Iteration "d", adding management reaction to iteration "c". Given the variation in trends between MPIC and New Brunswick, we have assumed under iteration "d" that management

intervention differs from that in iteration "b". Specifically, a Year 8 rate level change on top of the trend-line rate level change to achieve the loss ratio assumed in the Select Committee Report is not required; and

- Analyses aimed at stress-testing the effect of randomized claims experience in the critical first two years of operations only. A simulation using random numbers was used to select claims fluctuation experience in each of the first and second years of operation, selecting from the MPIC and New Brunswick claims fluctuation data described above. The 50th percentile represents experience close to "neutral"; unfavourable fluctuation experience at the 75th (slightly unfavourable) and 95th (more unfavourable) percentiles were examined.

3.3.3 Benchmarks of Financial Health

For each of the Scenario and related claim experience case we have focused on four benchmark areas to gauge the difference between each scenario and iteration. These are:

- Net Earnings (loss);
- Net Equity;
- Minimum Asset Test ("MAT"); and
- Minimum Capital Test ("MCT").

In addition to allowing a comparative analysis between scenarios, we use these tests to identify the level of investment required to meet the applicable standards.

The public sector insurers, as a best practice, create Position Funds or Rate Stabilization Funds to achieve rate stability according to guidelines set by their regulators and host governments.

Given the acknowledged need for proper capitalization in both public and private insurers, it is important to understand the implications of the test referred to above and monitor their outcomes, even though they are not typically imposed on public insurers. In order to meet the tests and ratios, a private insurance company will accrue deferred liabilities for future claim costs and reserves to accommodate their payment.

Recognizing that *Net Equity* represents the amount of capital invested in the business, this amount would be consolidated to the provincial statements if NBPI is a Crown corporation. In the event of a net deficit, the financial statements for the Province would assume this deficit through consolidation. In the event that there is no legal or accounting consolidation, debt rating agencies and investors would likely attribute the deficit to the Province, and would rate the Province of New Brunswick accordingly. A material deficit at NBPI could negatively affect the borrowing costs for the Province.

The *MAT* compares the assets required to the assets available. This test is currently applied in Ontario only and is seen as a more stringent asset requirement test. To pass the test, the ratio must be 0% or greater.

The *MCT* compares the excess capital (capital available minus capital required) to the capital required. This test must be met in order for a company to maintain its license to operate in Canada. To pass the test the ratio must be 100% or greater.

Once each Scenario and iteration was completed we performed further analysis to identify what combination of debt and equity would be required to satisfy three tests:

1. Positive Net Equity
2. Achieve 0% for the Minimum Asset Test
3. Achieve 100% for the Minimum Capital Test

3.3.4 Summary of Results

The results of the analysis described above, is summarized in the following table. Please refer to Appendix C for a detailed discussion of the results of the analysis.

The amounts shown are the capital (debt and share capital) which must be invested by the Government of New Brunswick in order to:

- Fund the start-up and pre-operating costs; and (in Case 4)
- Provide initial capitalization to avoid an equity deficit (which would be attributable to Government) and promote rate stabilization.

Estimated Investment Required
$millions

Case	Estimated Investment Required	Government Investment Repaid in Year
1. Select Committee Report	$82 in debt	2
2. Select Committee model, adjusted for additional IT costs indicated by further work by MPIC	$91 in debt	2
3. Case 2 above, with allowance for other potentially unfavourable developments in start-up and pre-operating period (see Operating Scenario 3 described in Section 3.3.1)	$108 in debt	2
4. Case 3 above, with capitalization of NBPI to avoid an equity deficit, and promote rate stabilization in the face of possible unfavourable claims experience fluctuation	• $120 – 130 in share capital (more aggressive) • $180 – 190 in share capital (more conservative) *(see note below)*	7

Please note that:

- Where investment is in the form of share capital, there is no payment of interest to Government by NBPI. The actual repayment schedule to Government may vary from that shown, depending on claims experience.
- Many scenarios regarding the requirements for capitalization of NBPI, over and above that required to fund start-up and pre-operating costs, were analyzed based on various start-up cost and implementation schedule scenarios and claims cost experience cases. These are shown in Appendix C. The estimated ranges shown above are presented as a prudent starting point for consideration should the Government elect to proceed with the establishment of NBPI. Capitalization at the "more aggressive" end of the scale would meet industry-standard tests of capital adequacy, but further capital could be required should early-year claims experience be unfavourable.
- Cases 3 and 4 also involve $4 million in additional annual operating costs.

The indications from this analysis are that, in order to establish NBPI with an allowance for unfavourable events in start-up and pre-operations, and to provide initial capitalization to avoid an equity deficit and promote rate stabilization, a share capital investment of $120 to 130 million (at the aggressive end of the spectrum) to $180 – 190 million (on the conservative end of the spectrum), would be required. Government would not earn a return on this investment, but would recoup it in full in or about Year 7.

3.3.5 Summary of Analysis – Select Committee Delivery Model

To summarize the above analysis of the Select Committee's proposed delivery model, should New Brunswick elect to implement this model it should allow for the potential that significantly greater start-up and pre-operating costs may be incurred, modestly higher ongoing operating costs would be applicable, and a substantial initial capitalization will be called for, compared to the figures projected in the Select Committee Report. Government's investment is unlikely to be repaid before Year 5. In no case does the Select Committee proposal, of all debt repaid in the first year meet any of the tests applied.

In addition, there is a risk that insurance may not be adequately delivered to New Brunswick drivers in an unfavourable time over-run situation. If the existing insurance companies are given notice that they will no longer be able to sell the mandatory coverage slated for NBPI monopoly provision after a certain date, and this date is not achieved, a gap in coverage is possible.

The Select Committee Report refers to potential international trade implications under NAFTA, GATT, and WTO agreements. The negative impact that these agreements may have on the attractiveness of the Select Committee model, if any, were not investigated as part of our assignment.

3.4 Review of Select Committee Proposed Product and Pricing

This section reviews the product proposed by the Select Committee, the pricing analysis presented, and related issues.

3.4.1 Overall Product Characteristics

The insurance product proposed by the Select Committee is characterized by

- A no-fault model in which compensation for pain and suffering is eliminated. Drivers need not and cannot sue to receive benefits. Fault in each incident is still determined and used as a rating factor; and
- Rating for purposes of determining premiums will focus on driving record, vehicle, vehicle usage, and optional coverage purchased. Rating factors **will not include** age, gender, marital status, territory, or premium payment history.

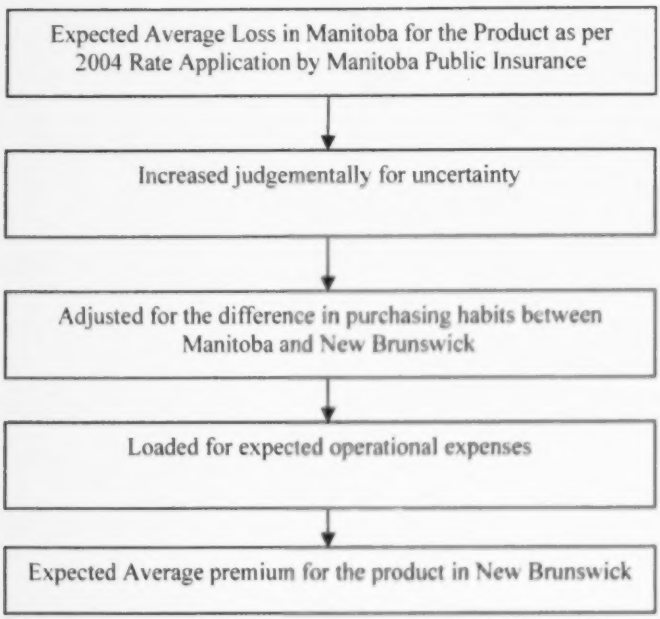
3.4.2 Overall Product Pricing

The pricing of the proposed no fault product was presented for private passenger auto (PPA) only. Motorcycle, commercial and other miscellaneous classes were not addressed in this analysis.

The average premium presented in the report relies entirely on the experience in Manitoba, since the proposed policy form is similar to the Manitoba form. The data underlying the analysis comes from the 2004 Rate Application of MPIC to the Manitoba Pubic Utility Board.

The expected average premium required to support the proposed no fault premium must be sufficient to cover claim expenses, operating expenses, taxes and leave an element of profit or surplus for rate stabilization. Please refer to section "Requirements for Surplus" below for further details.

The underlying key assumption of the pricing is the applicability of the expected loss cost (average loss per policy) presented in the Manitoba Rate Application to New Brunswick circumstances. The process used to estimate the cost of the product in New Brunswick is as follow:


Expected Average Loss in Manitoba for the Product as per 2004 Rate Application by Manitoba Public Insurance
Increased judgementally for uncertainty
Adjusted for the difference in purchasing habits between Manitoba and New Brunswick
Loaded for expected operational expenses
Expected Average premium for the product in New Brunswick

In the following sections we will comment on each item above, but first we comment on the methodology used to determine price.

Pricing Methodology

The pricing of a new product is always fraught with uncertainty due to the number of assumptions required by the exercise. It is good practice to use more than one method to derive the required results in order to minimize the risk of error or at least to understand the range of possible values around the estimate.

In our view, the method used in support of the Select Committee Report pricing projections is not sufficient to be used as a basis for undertaking wholesale change in the New Brunswick automobile insurance framework. The potential implications for New Brunswick drivers and Government are too great for a decision to be based on a single analytical methodology for projected pricing.

Further, we are concerned that the single method used ignores some material differences between New Brunswick and Manitoba that will have a significant impact on the required premium for the proposed product in New Brunswick.

Use of Manitoba's Expected Average Loss to Support Projected New Brunswick Pricing

The pricing presented in the Select Committee Report is based primarily on information presented in the 2004 Rate Application[2] of MPIC for rate effective from March 1 2004 to

[2] Manitoba Public Insurance, 2004 Rate Application Volume II Part 2 Section 20

February 2005. The report uses the expected average loss presented in the application and assumes that it will be an appropriate basis for projecting the expected experience in New Brunswick if the same insurance product was offered in the province. However, there are fundamental differences between the two provinces that make this assumption fragile.

The proposed no fault product offers, among other coverages, income replacement in the case an injured victim cannot work due to an injury sustained in a car accident. This makes loss cost sensitive to economic factors which can vary by regions over time. There are fundamental differences between Manitoba and New Brunswick that would have a direct significant impact on the cost of injury compensation. The table below provides some examples.

Item	*New Brunswick*	*Manitoba*
Unemployment Rate[3]	10.6%	5.0%
Percentage of Seasonal to Total Employment[4]	6.7%	2.8%
Median Employment Income[5]	19,987	21,953
Fatalities Rates per 100,000 population[6]	13.7	9.5
Injuries Rates per 100,000 population[6]	666.0	828.3

These measures indicates that there are significant differences between the two provincial environments, and highlights the risk inherent in using Manitoba data to project insurance costs in New Brunswick.

Recognizing the need for prudence in using Manitoba data (including some of the factors described above), the author of the report increased the Manitoba average claim cost by 20% for injury compensation costs. Another adjustment is for the property damage coverages. These adjustments are purely judgemental (that is, not based on analysis of New Brunswick data), and highlight the fragility of the estimate in the Select Committee Report. As these adjustments are judgemental their adequacy cannot be verified from the information base underlying the Select Committee Report.

In our view, the analysis performed in support of the Select Committee Report is not sufficient to ensure that New Brunswick drivers would benefit from the introduction of the product. In particular we are of the view that, taking into consideration the differences between New Brunswick and Manitoba, the premium required could be significantly different from that presented in the Select Committee Report.

[3] Statistics Canada 2003
[4] Total employment does not include self-employment
[5] Statistics Canada 2000 Census
[6] Canadian Motor Vehicle Traffic Collision Statistics: 2002

Purchasing Differences

Manitoba Basic policy mandates the purchase of collision and comprehensive coverage with a $500 deductible. In New Brunswick a significant portion of policyholders do not purchase comprehensive and an even greater number do not purchase collision. The pricing in the Select Committee Report adjust the Manitoba average losses for those differences.

Loading for Operational Expense

In Section 3.3 of this report we comment on the adequacy of the expenses associated with the proposed monopoly delivery system. To the extent those expenses are understated, including the need for any surplus provision, the average premium suggested will be understated.

Requirement for Surplus

This surplus element is required even in the context of a public monopoly. The size of the surplus element may however be different than in a private competitive system. This surplus is required to:

- Update/maintain the infrastructure of the company offering the service; and
- Create a surplus fund (equity) to absorb experience fluctuation (for example a "rate stabilization fund").

All public monopolies in Canada recognize the need to maintain a rate stabilization fund to absorb fluctuations in experience from year to year. In order to meet that objective, rates would have to contain a surplus element. The Select Committee model includes a 5% premium surcharge for the first five years only.

3.4.3 Individual rates determination

In the previous section we reviewed the aggregate pricing of the product as it is reflected in a notional average premium. It is a basic tenet of insurance that individual premium charged must reflect the expected loss cost of the individual insured. In this section we discuss the process by which individual rates are assigned resulting in an average overall premium.

General Concepts

The basic premise of pricing a risk is that the premium charged must be adequate, not excessive and not unfairly biased. Differential treatment among insureds is therefore expected in automobile insurance.

Differentiation in insurance is the identification, out of the general insured population, of groups of individuals with the same loss expectation as each other and a different loss expectation than

that in other groups. An average premium is then adjusted for a given group reflecting its expected loss.

Differentiating factors can be judged effective predictor of experience but socially unacceptable. The table below provides some examples.

Example of Differentiating Factors	*Socially Acceptable*
Age	Yes in some provinces
Gender	Yes in some provinces
Credit Score	No in most provinces
Driving Experience	Yes
Territory	Yes
Use of Vehicle	Yes
Type of Vehicle	Yes
Claim history	Yes
Age of vehicle	Yes
Number of convictions	Yes

The purpose of using differentiating factors is to reduce the subsidization of one policyholder to another in a given period. Every insured pays according to its average expected loss.

Impact in a Competitive Market

In a competitive market, insurers cannot ignore differentiating factors without jeopardizing their financial results and ultimately their financial condition. The following example details the implication on an insurer of ignoring territorial effects on expected cost:

> *The province has 2 actuarially valid territories. One has a justifiable premium of $1100 (territory 1) the other $900 (territory 2) for an average $1000 for the province. Insurer A charges a group of insured without regard for territorial differences $1000, insurer B charges one territory at $1100 and the other at $950. Everything else being equal, insurer B will insure all territory 2 risks since insureds will avail themselves of the cheaper premium, while at the same time increasing the profit for insurer B. Insurer A will get all insured of territory 1 because in that territory it offers cheaper price than A. However insurer A will lose money because the true cost of territory 1 is $1100, $100 above the premium received.*

In a competitive market, regulators cannot ignore differentiating factors without jeopardizing availability of insurance. Using the same example as above, the following details the implication of forcing insurers to ignore territorial effects on expected cost:

> *The province still has 2 actuarially valid territories. One has a justifiable premium of $1100 (territory 1) the other $900 (territory 2) for an average $1000 for the province. Insurers are forced to charge the same premium in both territories. Insurer A charges a group of insured without regard for territorial differences $1000, insurer B charges $950 but does not have any point of sales in territory 1. Everything else being equal, insurer B will insure all territory 2 risks since insureds will avail themselves of the cheaper premium while at the same time increasing the profit for insurer B. Insurer A will get all insured of territory 1 because in that territory they are*

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the only one offering the product. However insurer A will lose money because the true cost of territory 1 is $1100, $100 above the premium received. In the long run nobody will voluntarily offer their product in territory 1.

In a competitive delivery system and in the long run, it is not viable to ignore actuarially valid rating criteria without introducing market distortions that will restrict availability of insurance for some.

Monopoly Delivery

If a monopoly is the selected solution to deliver a mandated product, then the use of a public monopoly as opposed to a private monopoly is required to avoid abuse of monopoly power. In that context, the need to recognize all actuarially valid experience indicators is much less pressing as policyholders have no choice of carrier. Some policyholders are forced to pay higher than necessary premium to subsidize other risks.

Despite this power, monopolies in Canada, ICBC, SGI, MPIC all recognize the need for differentiation based on expected loss cost as a requirement for fairness. ICBC and MPIC have territorial pricing. All vary their premium according to usage and vehicle type.

Select Committee Proposal

The proposal makes use of a limited number of differentiating factors (driver experience, vehicle usage, vehicle type, claim/conviction history). The proposal therefore ignores, among others, territories, age and gender.

Given the comments above, the proposal on rating factors as identified in the Select Committee Report is not viable in the context of a private system.

3.5 Summary of Findings

Our high-level findings concerning the Select Committee model are as follows:

- The proposal to ignore valid risks in determining rates for individual drivers, as proposed in the Select Committee Report, has significant implications;
- To mitigate risk of initial mis-pricing, product pricing should be determined using more than the one pricing methodology used to support the Select Committee Report;
- There is a significant probability that the start-up and pre-operating costs may be materially higher than projected in the Select Committee Report, perhaps by $20 million or more;
- Capitalizing NBPI to avoid an equity shortfall (which would likely be attributed to the accounts of the Government of New Brunswick) will require a significant amount of additional capital if Government wishes to provide for a negative claims experience in the early years. This would be in the form of equity, which would not be repaid in the first year

of operation. Meeting industry-accepted capital adequacy tests would require further capital yet;

- There is a significant probability that the average premium of $993 will not be achieved under the Select Committee model, leaving aside normal trend-line escalation in claims and premium costs:
  - The Select Committee analysis of potential claims cost was not conducted in sufficient detail to provide assurance that the associated premium cost is robust;
  - Operating costs are likely to be modestly higher than indicated in the Select Committee Report; and
  - It is likely that Government will have to provide significant initial capitalization beyond that required to fund start up and pre-operating costs. The cost of these funds, if not borne by New Brunswick taxpayers, will put upward pressure on premiums.
- The Select Committee Report refers to potential international trade implications under NAFTA, GATT and WTO agreements. The negative impact that these agreements may have on the attractiveness of the Select Committee model, if any, were not investigated as part of our assignment.

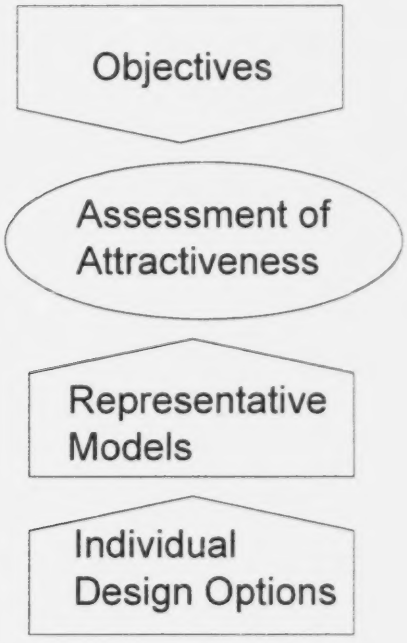
4 Evaluation of Alternative Delivery Models

As discussed in Section 3, implementation of the Select Committee model entails significant risk and complexity. However, providing the best automobile insurance system for the people of New Brunswick is an important priority of Government, as outlined in Section 2.

This section explores options for the delivery model, and an assessment of the potential attractiveness of each against New Brunswick objectives. Section 5 explores options for the design of insurance products to be offered in New Brunswick.

Our assessment of alternative models for delivering automobile insurance in new Brunswick was conducted as follows:

- The **principles and objectives** of New Brunswick, as communicated to us by Government of New Brunswick officials, were consolidated;
- The **individual design options** for the elements, or "ingredients", that make up an insurance delivery model were identified and assessed;
- **Representative models** – combinations of the individual design options that, together, represent options for potential implementation – were characterized; and
- These models were **assessed against the objectives** of New Brunswick for prospective acceptability.



4.1 Principles and Objectives of New Brunswick

The basic principles, objectives, and preferences expressed to us by the Government of New Brunswick are outlined in Section 2. To summarize:

Basic Principles

- **Affordability**
- **Accessibility**
- **Fairness**
- **Rate Stability**
- **Transparency**

Objectives and Preferences

- **Lowest possible rate levels** consistent with the basic principles and rate stability
- **Efficient and effective level of Government control**
- **Single territory if practical**
- **Cross-subsidization**, for example of new drivers
- **No absolute subsidization by Government**
- **Minimum necessary level of investment by Government**
- **Competitive Marketplace** if consistent with the basic principles
- **Product spectrum** including a "no-frills" product must be supported
- **No or minimum negative employment impact**
- **Facility Association** should not be required to serve drivers other than those high-risk drivers for which it was originally intended.

4.2 Delivery Models and System Costs

Given the importance of the lowest possible rates, a high-level assessment of the impact of the delivery model on potential rates was undertaken.

As described in Section 3.2, the estimated average street price in mid 2004 will be in the range of $1,011, versus a premium cost of approximately $1,047 for the Select Committee model, updating the Select Committee analysis for changes in the data on which its analysis was based.

The Select Committee Report cites a number of potential cost savings of a public monopoly versus a multi-provider market, including:

- Reduced commissions;
- Economies of scale; and
- No profit motive.

What would explain the apparent lack of advantage of a proposed public model (assuming all assumptions in the Select Committee report are accepted) versus recent observed data? Several observations are in order:

- **Economies of scale**: In a public monopoly model, all the policies in New Brunswick are accumulated in one carrier, which in principle is favourable to economies of scale. On the other hand, the resulting company is moderate in size as it only does business in New Brunswick, a small market; at the present time economies of scale are achieved through large national insurance companies. Therefore, economies of scale would not be realized to the same extent as in a larger market such as Manitoba.

- **Profit**: In a shareholder-owned insurance company, return on shareholder equity must come from premium income in excess of what is required to meet claims and operating costs (net of investment income). However, mutual insurance companies, which are owned by their policy-holders and exist for their sole benefit, have competed with shareholder-owned companies for many years in many markets including New Brunswick, with neither model demonstrating a clear advantage. It is also worth noting that of the total return on equity in a shareholder-owned company, only a portion is returned as cash in the form of dividends (and therefore "lost" to the system); the remainder is reinvested to ensure financial integrity of the business.

- **Competitive versus monopoly organization behaviour**: A public monopoly is subject to a very different set of pressures compared to a private insurer (shareholder-owned or mutual). Private insurers are much less subject to direct public pressure than would be a public monopoly; however, they are accountable for their results to their owners, must compete in the marketplace for business, and cannot look to the public purse in an emergency. Private companies therefore have incentives to optimize both claims settlement and operating expenses that a public monopoly does not have. A public monopoly may be subject to public pressure concerning claims settlement and premium levels, and does not have the market pressure to optimize operating costs – however skilled and well-intentioned the management and Board.

In our view, there are complex opposing forces at play affecting the overall cost of insurance in public monopoly and private models. The research to resolve these issues decisively is beyond the scope of our work on this project. However, given trends in the observed market price data, we advise extreme caution in concluding that the delivery model has a strong effect on overall pricing in the marketplace. For this reason, we have attached a "neutral" rating on this factor in the analysis that follows.

4.3 Individual Design Options

In designing a delivery model for automobile insurance in a given jurisdiction, there are three principal areas in which choices may be made:

- **Players in the marketplace**: Three main types of players need to be considered:
  - **Insurer principal(s)**: This player accepts the insured risks and provides the capital to support the viability of the insured risks;
  - **Fulfillment services**: This player (one or several) does the work of administering policies and claims; and
  - **Special risk pools**: This player (if applicable) accepts risks written below indicated risk cost, or which no market player will accept. Losses may be re-spread across the general population of policy-owners by various means;
- **Basis for pricing**: This is the relationship between policy pricing and indicated risk for that policy; and
- **Regulatory framework**: In an insurance-mandatory market, a regulator must oversee the fair and sustainable operation of the system.

4.3.1 Insurer Principal

There are four principal options with respect to the insurer principal(s):

- A **public monopoly**, as recommended in the Select Committee Report for mandatory coverage. The Select Committee cited a Crown corporation as a preferred vehicle;
- A market characterized by **multiple private insurers** (as is the case at present);
- A **cooperative or mutual monopoly**, established for the benefit of and owned by the policy-owners. As a practical matter, a newly established mutual monopoly in a market of nearly ½ million policy-owners would be most easily implemented by incorporating an authority to act in trust for the policy-owners. This authority may be able to secure capital to commence and sustain operations on a basis non-recourse to Government, by effectively capitalizing its monopoly position in a mandatory-purchase market (Nav Canada is a precedent); and
- A **public-sector competitor model**, in which Government establishes a public insurer competing directly with private insurers in a competitive marketplace.

It is worth noting that different models may be used for different coverages (as is the case in Quebec), if product design considerations highlight specific types of coverage of concern for pricing or other reasons.

4.3.2 Fulfillment Services

Insurer principals have the options of performing the fulfillment services with their own resources (as is the case primarily in the current system and in the Select Committee model), or contracting with a servicing carrier – one or more firms – to supply these services.

If the servicing carrier model is selected, it is important to maintain effective oversight of the claims settlement process, as the servicing carrier is disbursing money not its own.

4.3.3 Special Pools

A delivery model may involve special pools to serve risks otherwise uninsurable, or risks written at a price below indicated risk cost. Every non-monopoly, insurance-mandatory model requires a special risk pool, if for no other reason than to insure drivers with extremely high risk (such as those with multiple convictions).

Special pools are not necessary in monopoly models.

4.3.4 Basis for Pricing

A delivery model may call for pricing to be based, for the bulk of the policies (excluding those high-risk drivers generally found in special pools), on:

- **Indicated risk** including all relevant actuarial factors. This is the current system;

- **Variations from indicated risk**, either for
  - Relatively *small populations* (such as for new drivers); or
  - *Large populations* (such as would be the case in a one-territory model).

In all cases, the decision as to whether or not to offer a policy at a given price to a specific driver is made by the insurer principal; in a non-monopoly model, enforced pricing other than at indicated risk cost will result in accessibility issues (and has done so in New Brunswick and other jurisdictions). A monopoly model can accommodate pricing other than at indicated risk, as the monopoly provider can effectively cross-subsidize the drivers who would be higher risk on the prohibited rating factors. This would result in higher rates for a significant number of good or low risk drivers.

4.3.5 Regulatory Framework

An insurance-mandatory market requires effective regulation. This can take the form of:

- **Government regulation, with a "transaction" focus**: In this model, the regulator deals primarily with rate change applications on a case-by-case basis. This model is currently in place with the Public Utilities Board under its existing mandate;

- **Government regulation, with a "system stewardship" focus**: In this model, the regulator is charged with, and given the resources to address, issues such as rate stability and stakeholder transparency. Its rate approval role is maintained. A design option which Government may wish to evaluate further is implementation of guidelines governing rate increases for insurers aimed at rate stability and avoidance of rate "spikes". A further possible refinement is the introduction of a Consumer Advocate to promote fairness and transparency at the individual driver level;

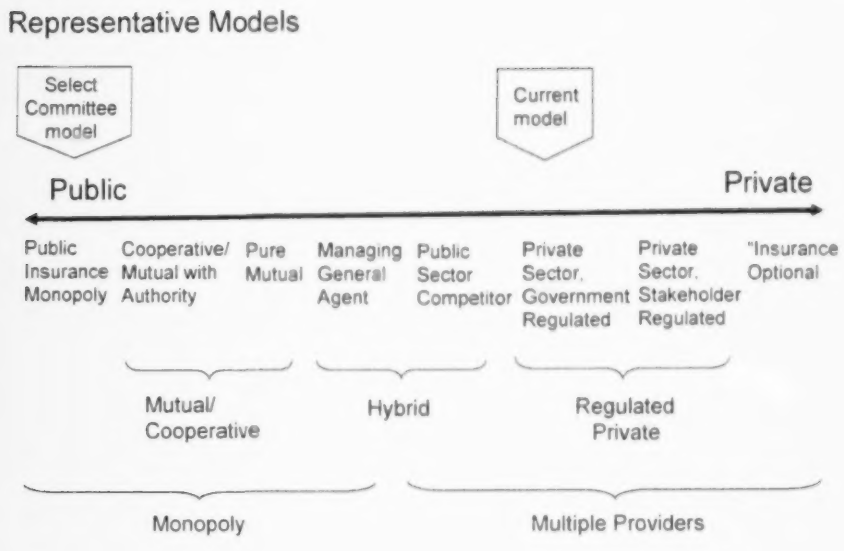
- **Stakeholder regulation**, also with a "system stewardship" focus: In this model, Government cedes some control over the regulator. The regulator is made up of representatives from customer and insurer groups, as well as Government. Government maintains legislative authority as at present.

4.3.6 Regulation of Agent Commissions

It is common for agent commissions to be regulated in a monopoly model, and this is proposed by the Select Committee. To date, there is no Canadian precedent for regulation of commissions in a private insurance model.

4.4 Representative Models: Description and Assessment

Combinations of the options described above characterize the overall choices that New Brunswick has in selecting a delivery model for the future. A *range* of possible models, and selected specific representatives models, are shown below:



In this report, analysis of two models, the Public Monopoly Model and the Private Insurer Model With Enhancements are presented.

4.4.1 The Public Monopoly Model

The design of the Select Committee model is as follows:

Design Choice Area	Option for this model
Insurer Principal	• Newly established public insurance monopoly, NBPI (a Crown Corporation) • Private insurers able to offer additional injury and additional third party liability coverage in competition with NBPI
Fulfillment Services	• NBPI
Special Pools	• No – additional premiums assessed directly to high-risk drivers. Cross subsidization is inherent.
Basis for Pricing	• Substantial variation from indicated risk cost • Territory, age, gender, martial status, payment history all prohibited rating factors
Regulatory: Overall system	• Government, transaction focus (PUB)
Regulatory: Agent Commission	• Yes

One aspect worth noting is the potential for losses in the part of the product offering (additional injury benefits – higher income replacement benefits, and additional third-party liability coverage) in which NBPI will compete with private insurers. Given the prohibited rating factors, availability of private insurer coverage may be uneven, with the private insurers having an incentive to "cherry-pick" the better risks (based on the prohibited rating factors) leaving the higher-risk customers for NBPI. This may result in losses, which would need to be recovered from other NBPI revenues (i.e. via a cross subsidization).

As discussed above, we are wary of attributing systematic benefits in premium costs to a specific delivery model. Given this, the **primary motivators** for considering this model are:

- The ability to subsidize across indicated risks classes (those prohibited in the model), without overt "assessment" of resulting losses against other policy-holders; and
- Transparent accountability to the New Brunswick public. In the absence of any proprietary information of private insurers, NBPI and its regulator may disclose information in great detail.

The **greatest challenges** associated with this model are:

- Capital and start-up costs, and associated risks, are significant as described in Section 3;
- Implementation will be complex, over a 1 – 2 year time frame; and
- There is a risk, with a public insurance company, for there to be resistance to economic rate increases in periods of rapid increases in claims cost. If premiums are not increased to cover costs, this would lead to absorption of risk by the Government.

The assessment against New Brunswick's **basic principles** is as follows:

- **Affordability**: Neutral to weak, based on requirements for start-up capital and potential risk absorbed by Government
- **Accessibility**: Strong
- **Fairness**: Weak versus "driver bears own risk cost" paradigm; strong versus "premium based on driving record" paradigm.
- **Rate Stability**: Strong in the *short run*, as the public monopoly can dictate its own prices. There is the potential for significant volatility if NBPI is obliged to "catch up" after a period of under-pricing.
- **Transparency**: Strong

Versus the **objective and preferences**, the assessment is:

- **Rate levels**: Neutral
- **Government control**: Weak; this is the option with maximum Government intervention.
- **Territories**: Strong; one territory accommodated.

- **Cross-subsidization of risk classes**: Strong – easily accommodated.
- **Level of Investment by Government**: Weak – highest-cost option.
- **Competitive marketplace**: Weak by definition as a monopoly.
- **Product spectrum**: Neutral to weak – private insurers may offer additional coverage, but not likely to drivers with high risk on prohibited factors.
- **Employment impact**: neutral to negative as per the analysis in the Select Committee Report. A loss of 1,134 existing insurance industry jobs would be offset by 800 jobs at NBPI and an estimated 275 person-years of employment due to the impact of reduced insurance premiums redirected to spending in New Brunswick. This last positive effect would be mitigated if, as the analysis in Section 3 indicates, there is no material savings in premium costs under the NBPI model.
- **Facility Association**: Strong; there is no need for a Facility Association in a monopoly model.

4.4.2 The Private Insurer Model with Enhancements

This model incorporates two important changes from the existing model:

- The evolved "system stewardship" regulatory framework described above; and
- The establishment of special pools outside the Facility Association to serve groups such as new drivers, at rates below indicated risk. The cost of this is re-spread across other policy-owners as is the case now for the Facility Association. The Facility Association will still be in existence to serve the high-risk drivers for whom it was originally intended.

The design of this model is as follows:

Design Choice Area	Option for this model
Insurer Principal	• Multiple private insurers
Fulfillment Services	• Insurer principals
Special Pools	• Yes, Facility Association for small population of high-risk drivers • Also special pools for specific populations such as new drivers
Basis for Pricing	• Indicated risk except for pools as above
Regulatory: Overall system	• Government, system-stewardship focus
Regulatory: Agent Commission	• No

The **primary motivators** for considering this model are:

- Rate stability, through the actions of the evolved regulator;
- Transparency, also via evolved regulation;
- Accommodation of specific populations for whom below-indicated-risk pricing is deemed socially desirable; and
- Ease of implementation, requiring only the evolved regulatory framework and special pools.

The **greatest challenge** in this model is potential lack of perceived change.

The assessment against New Brunswick's **basic principles** is as follows:

- **Affordability**: Neutral
- **Accessibility**: Strong – private insurers will offer policies at indicated risk-based pricing.
- **Fairness**: Strong versus "driver bears own risk cost" paradigm; weak versus "premium based on driving record" paradigm.
- **Rate stability**: Strong compared to the current model. As with any model, sustained large increases in claims will ultimately be reflected in premium pricing.
- **Transparency**: Strong, although some information may be behind a veil of proprietary information of private companies.

Versus the **objective and preferences**, the assessment is:

- **Rate levels**: Neutral
- **Government control**: Strong
- **Territories**: Weak, as a single territory would result in a population of drivers to be insured at rates below indicated risk cost that is too large to be accommodated by the proposed pool structure.
- **Cross-subsidization of risk classes**: Strong – easily accommodated for smaller populations.
- **Level of Investment by Government**: Strong
- **Competitive marketplace**: Strong
- **Product spectrum**: Strong – diverse market as at present.
- **Employment impact**: Neutral.
- **Facility Association**: Neutral to strong. The Facility Association will not be populated by other than the high-risk drivers for whom it was intended.

4.5 Summary of Delivery Model Options

Given the objectives articulated by Government, the current system with enhancements to the regulatory framework, and with the addition of a special pool for new drivers, appears to best meet the overall needs of New Brunswick.

5 Alternative Product Design Options

This section explores alternatives to the Select Committee Report's recommended product offering, which may offer benefits to New Brunswick as measured against the Province's stated objectives.

5.1 Rating Structure

The feasibility of a rating structure depends on the delivery model selected, as discussed in Section 4. The use of a private competitive delivery system dictates the use of all known factors justifiable actuarially. Any deviation would lead to a decrease in availability for the classes perceived as subsidized.

The use of a monopolistic public delivery system removes the requirement to use actuarially justifiable factors and facilitates cross subsidization. The definition of fairness is changed from "each group is required to pay according to its expected loss" to "each group is charged an amount judged fair according to rules set by the monopoly".

In a mixed system, the issue is less clear cut. However, one has to plan for the expected end result which is most likely to be that the Public provider will get a disproportionate share of any under priced market if the under pricing can be identified a priori based on a valid rating variable. This risk was identified in Section 4 with respect to the optional coverage in the Select Committee model.

The following variables are strong indicators of expected losses:

- Territory
- Driving Record (# of claims, convictions)
- Use
- Type of vehicle
- Age/Driving Experience
- Gender

To forbid the use of any of those variables is likely to create availability shortage for some segments of the population in a private delivery system.

5.2 Use of Territories

We understand that territorial pricing is an important issue in the province. If the province wishes to move to a single territory then the following will occur:

- Availability of insurance in certain territories will decrease; and/or
- Rates will increase for insureds outside the high cost territories

Territorial Analysis

Territory	Abbreviated Description	Insured Car	Average loss per insured	Relative Performance
Mandatory Coverages				
402	Saint John and Moncton	160,403	655	97.7%
401	Fredericton, Hartland, Woodstock	102,277	582	86.9%
405	Northumberland and Victoria Counties	34,772	739	110.2%
404	Bathurst, Edmunston, Caraquet	70,734	799	119.2%
Total		368,186	670	100.0%
Full Coverage (TPL,AB,UM,Coll 250, Comp 100)				
402	Saint John and Moncton	160,403	880	99.1%
401	Fredericton, Hartland, Woodstock	102,277	805	90.6%
405	Northumberland and Victoria Counties	34,772	941	106.0%
404	Bathurst, Edmunston, Caraquet	70,734	1,001	112.7%
Total		368,186	888	100.0%

Source: IBC 2002 Automobile Insurance Experience, Territorial Exhibits for 2002 Accident Year

Using the average loss per insured province-wide as our reference value we find that there is a 32% difference (119.2 – 86.9) between the highest cost territory (404) and the lowest cost one (401) for people with mandatory coverage only. For policyholder with full coverage the difference is 22% (112.7-90.6).

To force the private market to ignore territorial differences in expected costs will work against the goal of maintaining availability throughout the province and the goal of reducing the residual market mechanism (Facility Association).

5.3 Development of Basic and No-Frills Products

The cost of insurance consists of two principal elements: claim costs, and other expenses. Any meaningful reduction in premium must either reduce claim costs or reduce the expenses to manage the product.

The New Brunswick marketplace is competitive. Management costs are subject to ongoing downward pressures due to this competition as those costs are most directly controlled by insurers. (Please refer to Section 4 for a discussion of operating expenses versus delivery models.)

Claim costs are primarily driven by the coverage afforded by the policy. A reduction of coverage is necessary to reduce premium. There are several ways to reduce coverage:

- Increase deductible on first party coverages;
- Cap recovery on third party coverages; or
- Eliminate types of losses from the coverage.

The reforms implemented by New Brunswick in 2003 reduced claims costs by capping the recovery under third party liability for soft tissue injury.

Our mandate included the development of concepts for a new Basic Policy, and a No Frills Policy. The No Frills Policy was to be priced meaningfully below the Basic Policy.

Creating more coverage options to the public so that they can tailor their coverage to their personal circumstances requires the introduction of the concept of *direct compensation* for third party liability property damage claims.

5.3.1 Direct Compensation

Direct Compensation ("DC") is a concept by which an insured looks to his or her own insurer for compensation for losses caused by a third party, as opposed to looking at the third party insurer. The concept is used successfully in Quebec and Ontario for property damage to insured vehicle.

The advantage of DC is that it permits the introduction of more coverage choices.

DC does not remove the concept of fault from loss recovery – it changes the source of funds. Under DC an insured gets compensated from his own insurer for all damages to his car regardless of fault. Fault is still used to determine how much the insurer will pay under the TPL part of the policy and how much under collision.

The advantage of DC is that the insured can decide to have a deductible on this portion of the policy in exchange for a reduced premium. This is not possible in the current system as insurer, under third party liability, pays for damages to cars it does not insure and for which the value cannot be determined ahead of time.

Because under DC, insurer of insured *A* receives the premium from insured *A* to insure property damage suffered by insured *A*, it can offer coverage alternatives to *A*. Insured *A* may decide not to be insured for property damage in exchange for a reduced premium.

5.3.2 Basic Product

The Basic Product is the default offering for policyholders. In other words the Basic Product is the coverage afforded to all drivers in the province unless a driver specifically opts out of certain coverages, thereby opting for the No Frills Policy defined below.

The Basic Product incorporates the concept of DC for property damages (DCPD) caused by third parties to the policyholder's car Introducing DC enables the introduction of a deductible in the recovery of property damage caused by third party to the policyholder's vehicle.

Under a proposed Basic Policy the deductible level is $0 for DCPD. The distribution of the deductible levels for collision, comprehensive, all perils and specified perils remain the same as they exist in the current market. Accident Benefits coverage remains at the current level.

The projected cost of this policy is estimated at 100% (i.e. no change) of the current product (taking into account the 2003 reforms).

5.3.3 No Frills Product

This product starts with the Basic Product and removes certain coverages. Under this No Frills Policy the deductible level is $1000 for DCPD, collision, comprehensive, all perils and specified perils. Accident Benefits coverage is reduced in several areas:

- Death benefit is reduced by half
- The cap on the funeral benefit is reduced by half
- Maximum weekly disability benefit is reduced by half
- Home care benefit is reduced by half
- Medical coverage limit is reduced from $50,000 to $25,000

The projected average province-wide premium for this No Frills Product would be 83-88% of the current product, given the prevailing mix of coverages purchased for the current product.

5.3.4 Measuring Fault in a DC system

The importance of accuracy in the process for measuring fault is relative to the amounts being adjudicated under the DC coverage.

The consequence of fault measurement on property damage loss is small. Insurers have developed charts to help establish fault, and this system has proven to be workable and well accepted by the public in Ontario and Quebec.

The consequence of the at-fault measurement is to whether or not the accident will impact the driving record of the insured and whether or not the collision or the DCPD deductible will apply if they are different from each other.

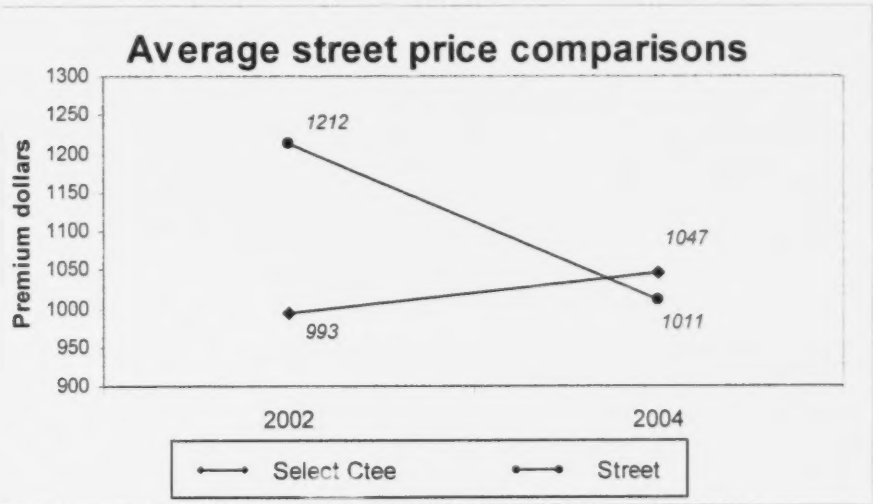
6 Conclusions

Our analysis provides the basis for conclusions in two areas: the Select Committee Report, and a potential alternative model.

6.1 Select Committee Report

Given reductions in premiums as the effect of previously-implemented reforms are reflected in insurer rate filings, implementation of the Select Committee Report is more likely to result in higher premiums than lower.

b) The average premium price cited in the Select Committee Report is $993 which when trended for claim inflation would increase to $1,047, as of mid 2004. This is higher than the estimated current "New Brunswick street price" of $1,011 as of mid 2004.



b) There is a significant probability that the average premium will be higher than cited in the Select Committee Report:

- Claims costs – the dominant cost underlying the premium – may vary significantly from those cited in the Select Committee Report;
- Operating costs will likely be moderately higher; and
- Additional costs associated with start-up, pre-operating expenses, and initial capitalization (see below) will either add to the indicated premium or would require a subsidy by the Government of New Brunswick.

c) Required funding for start-up, pre-operating expenses, and initial capitalization will likely be greater in magnitude and duration than indicated in the Select Committee Report:

- There is a significant probability that costs for start-up and pre-operating expenses will be greater than indicated in the Select Committee Report;
- Total initial capitalization would likely range between $120-190 million in order to promote rate stabilization and avoid a potential deficit (attributable to the Government of New Brunswick). This capital would not be fully repaid to Government in the first year of operation, as was proposed in the Select Committee Report; and
- It is not prudent to repay debt at end of Year 2.

d) Risks associated with implementing the Select Committee model are significant:

- Implementation of the Select Committee model would be a complex undertaking with many potential areas for unfavourable variations from planned implementation timing and cost;
- The proposed implementation timetable of one year is aggressive; if it is not achieved, New Brunswick drivers could potentially be left without readily available insurance since private insurers may not be in a position or be willing to provide coverage beyond the one-year implementation timeline;
- NBPI, as an insurer likely to be perceived by drivers to be Government-controlled, would likely be under great pressure to underprice the product; with its poor initial capitalization, it will not have the financial resources to provide this without putting the Government of New Brunswick at further risk; and
- The Select Committee Report refers to potential international trade implications under NAFTA, GATT, and WTO agreements. The negative impact that these agreements may have on the attractiveness of the Select Committee model, if any, were not investigated as part of our assignment.

e) In our view, the methodology used to support the Select Committee Report recommendations is not sufficient to be used as a basis for wholesale automobile insurance change in the province.

6.2 Potential Alternative Automobile Insurance Model

Given our findings above, the key principles and objectives of the Government of New Brunswick may be better achieved, on a less risky basis, by implementing an alternative model. This model, which represents an enhancement of the existing automobile insurance model in New Brunswick, would feature:

- Automobile insurance provided by private insurers operating under a new and enhanced regulatory framework, characterized by:
  - A system-wide stewardship mandate;

- A focus on insurance only;
- Enhanced analysis and reporting of claims cost trends;
- An emphasis on rate stability and avoidance of rate "spikes"; and
- Introduction of a Consumer Advocate to protect consumer interests.

- A new insurance product framework featuring:
  - Two insurance products: the "basic" product (with pricing levels consistent with current pricing levels), and the introduction of a lower-cost "no-frills" product; and
  - Increased driver choice regarding coverage and premium cost based upon the introduction of "direct compensation" for property damage claims.

Appendix A: Limitations and Qualifications

This report was prepared during the time frame May 17 to June 25, 2004 for the sole use of providing AG with analysis and other related information to assist it in providing advice to the Government respecting potential automobile insurance reform in New Brunswick. We have not performed a detailed analysis of the automobile insurance industry, alternative automobile insurance delivery models and/or product delivery and pricing models. Instead, we have performed a limited review and analysis of the proposed public automobile insurance model recommended in the Select Committee Report, and undertaken exploratory investigations into alternative automobile insurance delivery models and alternative examples of automobile insurance product coverage and pricing, given the Province's principles and objectives, including assessing the potential implications of such alternatives for New Brunswick.

In addition:

- Our review and analysis has not included an independent audit/verification of information contained in the Select Committee Report or any other reports used as a basis of our analysis, including supplementary information provided by consultants who assisted with the preparation of the Select Committee Report. In addition, we do not express any opinion on such information, analyses or projections contained within any source documents provided by the Province or other independent advisors.

- Our review and analysis has been restricted to the private passenger automobile insurance industry in New Brunswick only, and has not included other types of vehicle insurance such as motorcycles, commercial vehicles, all-terrain vehicles, and antique and other non-standard automobiles.

- The projected premium rates shown in this report are point estimates. As estimates, these values are subject to variability, and this variability can have a material impact in the near term. The possibility of this variability arises because all factors affecting future premium rates have not taken place and cannot be evaluated with absolute certainty. Such factors may include, but are not limited to, changes in judicial interpretation of policy provisions and expected future inflationary trends.

- Our projection of the impact of certain regulatory changes and other assumptions are based on New Brunswick's historical experience as reported by the Insurance Bureau of Canada. We have anticipated no extraordinary changes to the various factors that might impact the future cost of claims. We have, however, used methods of estimation that we believe produce reasonable results given current information. No guarantee, either expressed or implied, should be inferred that our estimates will develop as shown in this report.

- This report presents potential plausible outcomes with respect to the future financial position of the proposed public automobile insurance model recommended in the Select Committee Report ("NBPI") in order to determine the potential financial condition of NBPI. It is not to be construed as determining the statistical expected value of the financial results of NBPI or

as a forecast of performance. It is an analysis of the results of applying various assumptions to NBPI to measure the impact on the capital.

The results of this analysis are estimates and are subject to variability. The possibility of this variability arises because all events affecting the performance of NBPI have not yet taken place and cannot be evaluated with absolute certainty. Such events may include, but are not limited to, changes in judicial interpretation of policy provisions and changes in expected future inflationary trends. The projection of liabilities is based on historical results and no extraordinary changes to the various factors that might impact the future cost of claims have been anticipated. We have, however, used methods of estimation that we believe produce reasonable results given current information. No guarantee, either expressed or implied, should be inferred that the estimates will develop as shown in this report.

We have analyzed the projected assets underlying NBPI over the five year projection period as shown in the Select Committee Report. This may not be construed as a specific opinion on the value of these assets. It is assumed that management would, in the future, use a prudent investment strategy consistent with the proposed business of NBPI.

Appendix B: Scenario 3 Analysis

Scenario 3 illustrates an "unfavourable case" scenario. While the assumptions in the Select Committee Report were intended to be conservative, upon review we have identified specific assumptions that may be susceptible to unfavourable variation. The assumptions used under Scenario 3 adjust the Select Committee Report to reflect changes to:

1. Start up Costs – including Information Technology, Consulting and Operational as a result of delayed start up.
2. Ongoing Operational Costs – related to the fixed costs in the context of potentially poorer scale economies compared to Manitoba.

As a result of increasing the total start-up costs, in Scenario 3 an additional $26 million (total $108 million) will be required during the start up period to ensure that there is adequate cash to reach start-up.

It is important to note that Scenario 3 does not represent the highest possible cost, as complex projects of this type may experience even greater cost and time over-runs.

Information Technology

The Manitoba Public Insurance Corporation ("MPIC") has signed a letter of intent indicating that they would provide services to New Brunswick to support the implementation of their public insurance organization. This would include the following services:

- Access to MPIC's Autopac On-Line system
- Data conversion
- Internal system forms modification (bilingual)
- "Go Live" support
- Support published documentation (bilingual)
- Initial system training effort for agents, brokers, call centre staff, and NBPI executive
- An option to access information on MPIC's website

Based on our discussions with MNP, we have learned that MPIC revised their initial estimate to include an additional $9,000,000 of anticipated cost to provide the services above. This increase is based on a further review by MPIC of the requirements and anticipated cost to provide these services.

There are several risks associated with IT implementation that have the potential to inflate the IT implementation cost estimate:

- Manitoba has never offered this IT implementation and start-up service before.
- There is no existing agreement with private sector providers to cooperate with New Brunswick to provide information on claim history or payment history. As such this information must be either gathered or obtained from the private sector. In the event that it is

gathered from the private sector, the data conversion has the potential to be very difficult – especially in the event that information is provided in vastly different formats.

- The MPIC software is based on their local legislation and priorities. Legislation may differ significantly between New Brunswick and Manitoba. The adjustments required to the software may be costly and time consuming for both parties.
- Large, first-of-type IT development and implementation projects have, in general, a strong tendency to exceed original time and cost estimates.

Consulting Costs

The consulting costs illustrated in the Select Committee Report include the following:

- Actuarial
- IT
- Insurance Consulting
- External Legal Services
- Program and Project Management
- Architectural/Design Consultation

The scope of the Select Committee Report did not allow for specifically costing the individual Consulting Costs. It is recommended that this exercise be undertaken prior to implementation.

There is a risk that the costs associated with Program and Project Management, and Architectural/Design Consultation may be understated. It is estimated that these costs could exceed 5% to 9% of the Construction Cost and amount to approximately $1,800,000. To estimate the 'unfavourable case' Scenario we have doubled the Consulting Costs to take these potentially increased costs into consideration.

Implementation Timing

The Select Committee Report assumes that the majority of implementation will occur within a one year time period. For a variety of reasons this estimate may be considered aggressive. An implementation delay may occur in some, or all of the following areas:

- IT implementation
- Construction
- Hiring adequately skilled resources

For purposes of our analysis we have focused on construction related delays, however the impact of other individual delays would be similar. The impact of consecutive delays could be very significant if realized.

The Select Committee Report assumes that construction of the facilities to house the operations will be competed within a 1 year time frame. As with any construction project there is a risk that

construction will be prolonged once it has started. This may occur for a variety of reasons including:

- Poor weather
- Unexpected permit delays
- Unexpected problems with the construction site, for example ground water
- Unexpected labour issues – shortages, strikes, scheduling

The construction delay may cause the following to occur:

1. Delayed start to operations creates a gap in insurance coverage
2. Paid employees not appropriately utilized
3. Increase interest cost due to delayed start of operations
4. Increased operational cost due to delayed start of operations

Due to these risks Scenario 3 examines the impact of a 6 month delay in the start of operations as a result of construction not meeting the 1 year target deadline. This assumes that once construction starts, unanticipated delays occur in such a way that over the course of the year it becomes gradually apparent that construction will not be completed at the end of a one year time frame. As such, towards the middle to end of the construction period the hiring of staff is scaled back from the planned hiring pattern.

Each of the potential risks is discussed in more detail below.

1. Potential Gap to Insurance Coverage

Once the New Brunswick government makes the announcement to implement a public insurance scheme, private insurers will react by withdrawing operations from the province as of the stated implementation date. Private insurers will not be prepared, nor may they be inclined to assist the Province in the event of a change in the implementation timing. If this is the case the Province may be in a position of unexpected liability to those individuals who are uninsured in the period between private withdrawal and public start up. The potential monetary impact of this is unquantifiable.

2. Paid Employees Not Appropriately Utilized

The timing of the construction delay may cause the staff that has been hired through the course of the year to be underutilized and unable to commence work on schedule.

As a result of the construction delay, management would adjust the hiring pattern based on their knowledge of the potential and then actual delay. The following table illustrates the comparative hiring pattern.

Timing	Select Committee Report Hiring	Hiring with 6 Month Delay
Day 1	8 Senior Managers	8 Senior Managers
Day 90	20 Core Team Members (Management)	20 Core Team Members (Management)
Day 180	250 Team Members	250 Team Members
Day 270	500 Team Members	438 Team Members (hire only 75% of anticipated 250 due to possible construction delay)
Day 365	700 Team Members	538 Team Members (hire only 50% of the anticipated 200 due to certain construction delay)
Day 730	800 Team Members	

The following table illustrates the impact of the cost delay on compensation costs.

	FTE	Rate	Annual Cost	Cost for 6 Month Delay
Day 1	8 Senior Mgmt.	$150,000	$1,200,000	$600,000
Day 90	12 Additional Core Team (Management)	$75,000	$900,000	$450,000
Day 180	230 Additional Team Members Remaining 37 Middle Management + representative proportion of remaining 193	37 @ $75,000 15 @ $60,000 84 @ $46,500 94 @ $28,500 Total	$2,775,000 $900,000 $3,906,000 $2,679,000 $10,260,000	$5,130,000
Day 270	Scale back hiring from plan due to delays – 75% of planned 250 additional hires. Actual hires 188 – At proportion below Management	14 @ $60,000 82 @ $46,500 92 @ $28,500 Total	$840,000 $3,813,000 $2,622,000 $7,275,000	$3,637,500
Total For Year 1			$19,635,000	
Day 365	Scale back hiring from plan further due to delays – 50% of intended additional hiring – Actual hires 100 – At proportion below Management levels.	8 @ $60,000 43 @ $46,500 49 @ $28,500 Total	$480,000 $1,999,500 $1,396,500 $3,876,000	$1,938,000
Total			$23,511,000	$11,755,500

The total additional cost as a result of compensation is $11,755,500. There will be additional costs related to these employees that have not been incorporated into the analysis, for example benefits which would be in the range of 20% of salary cost.

3. Increased Interest Cost

The delay in the start of operations will cause the debt repayment to be delayed. It is assumed that the repayment will occur 6 months later than originally anticipated, to mirror the delay in the start up of the operations. The repayment timing may be impacted by the increased level of expenses as a result of the delay, which may compromise their ability repay the debt obligation.

4. Increased Operational Costs

There may be additional operating costs that will continue to be incurred during the delayed start up period. For example if advertising was used to announce and inform the public on the new insurance organization and its operations, further advertising will be required to announce the delay and its implications to the public.

Due to the delay in the startup of operations we have estimated a 10% increase in operational expenses.

Impact of Fixed and Variable Costs

The Select Committee Report assumption is that Operating Cost per policy demonstrated in years 2 through 5 is the same in both Manitoba and New Brunswick. Manitoba is a larger province and as such will benefit from economies of scale to a greater extent than would New Brunswick. To estimate the impact of economies of scale an approximation of the fixed and variable costs is necessary.

The fixed costs associated with the operations will incorporate such expenses as IT infrastructure including the cost of application development, design and maintenance; senior management salaries; operations related to governance and regulatory frameworks, actuarial operations with respect to product design and pricing.

If, hypothetically, the split between variable and fixed expenses is 75% to 25% there will be the following impact on operational costs in New Brunswick.

- Operational Costs in Manitoba and New Brunswick currently estimated at: $50 per policy
- Therefore the fixed costs in Manitoba will be:
  - $50 * 809,000 policies * 25% = $10,112,500
- The fixed costs incorporated into the Select Committee Report then would be:
  - $50 * 473,000 policies *25% = $5,912,500
- The difference between these two is the amount that the Select Committee Report potentially understates the operating costs as a result of fixed costs and is $4,200,000.

The information available to us did not provide guidance concerning the variable/fixed cost split. We have used the $4.2 million indicated by the above analysis for the purposes of Scenario 3.

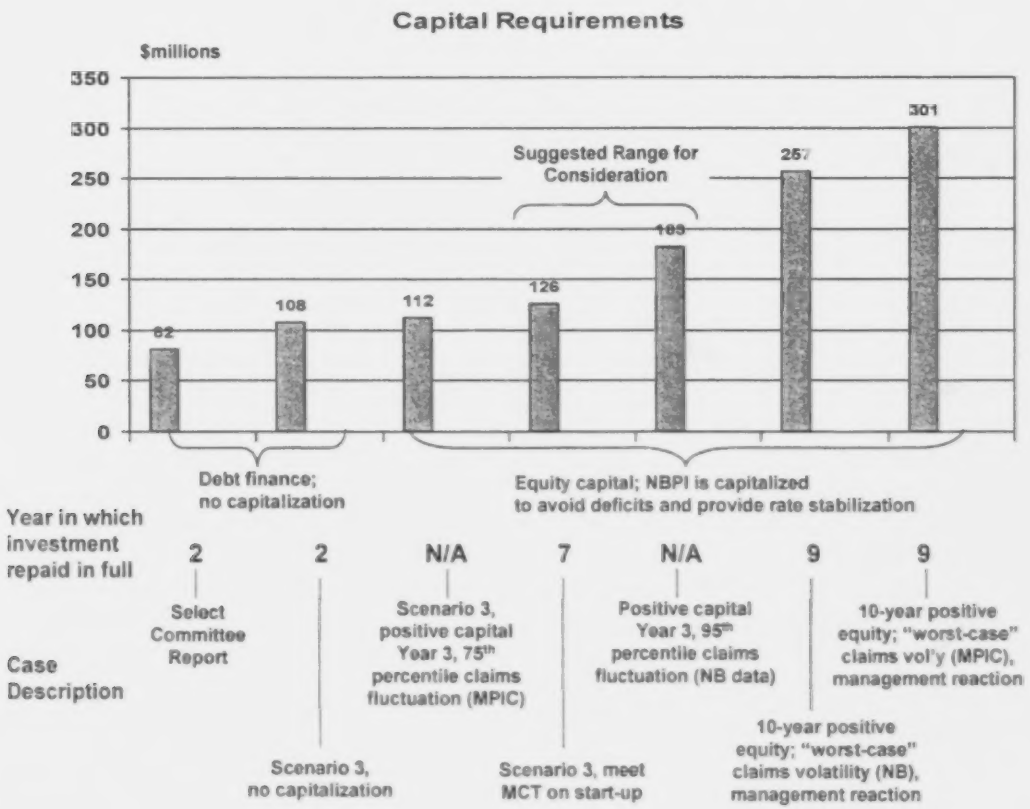
Appendix C: Delivery Model Financial Analysis

Summary

The results of the analyses performed based on the assumptions described in Sections 3.3.1.through 3.3.3, is summarized in the chart below. These are expressed as the amount of capital (equity capital and debt) which must be invested by the Government of New Brunswick in order to:

- Fund the start-up and pre-operating costs; and
- Provide sufficient initial capitalization that the applicable financial benchmarks are met.

The table below provides a summary of capital required under various scenarios (described opposite the title "Case Description"). The timing of repayment of Government's investment is shown as well; the actual schedule of repayment may vary depending on claims experience and the associated effect on capital.



In the chart above "N/A" indicates a three-year analysis; capital is not repaid by the end of the analysis period. The cases illustrated above are shaded in the further detailed tables provided below, for ease of cross-referencing.

This analysis indicates that in order to avoid an equity deficit in a "worst-case" claims fluctuation case (even with management reaction), $150 million or more in equity capital would have to be invested for an extended period of time, over and above amounts required to fund start-up and pre-operating expenses. Slightly unfavourable early-year claims fluctuation cases indicate a need for investment of share capital rather than all debt, with the overall amount similar to the anticipated expenses for start-up and pre-operating costs ($112 million versus $108 million in the examples above); more unfavourable early year cases call for investment of $75 million to $120 million in share capital (over amounts required to fund start-up and pre-operating expenses). In no case does the Select Committee proposal of all debt repaid in the first year of operation meet any of the tests applied.

Given the wide range of outcomes depending on the claims fluctuation case, what might be a prudent level of initial capitalization to avoid equity deficits, and provide a measure of resilience for rate stabilization? One potential guide may be the industry-standard test, such as the MCT (the less stringent of the two presented), that were developed specifically to demonstrate integrity in the face of representative claims fluctuation. Using the cases without added claims fluctuation, Scenario 3 calls for capitalization of $126 million (all in share capital), or $18 million more than required to fund start-up and pre-operating expenses. The $126 million investment would be fully repaid by the end of Year 7. If this guideline is accepted, any capitalization below this level may expose Government to risk. Please note that investing $126 million as discussed above is not a guarantee that no further capital would be required; if NBPI has an unfavourable claims experience in its early years, a further capital contribution by Government may be called for.

Results of Financial Analysis

The table below provides further detail on the result of the financial analysis, again presented as the amount of capital (debt and equity) that Government would need to invest in order to meet the indicated financial benchmarks.

Investment Required to Launch NBPI

Note: $ millions, (Year capital is fully repaid); all amounts are share capital unless otherwise stipulated.

Scenario	Positive Equity	Meet MAT	Meet MCT
Select Committee Report: $82 million in debt to be repaid in one year	Not achieved	Not achieved	Not achieved
Cases with no Claims Fluctuation			
Scenario 1: Select Committee assumptions	$40 $42 Debt	$157 (7)	$98 (6)

	(4)		
Scenario 2: Select Committee assumptions with inflation and growth	$37 $45 Debt (4)	$159 (7)	$99 (6)
Scenario 3: inflation and growth, plus unfavourable cost sensitivities	$57 $51 Debt (5)	$186 (9)	$126 (7)
Cases with Claims Fluctuation, No Management Reaction			
Scenario 1a (MPIC experience)	$402 (11+)	$525 (11+)	$487 (11+)
Scenario 2a (MPIC experience)	$476 (11+)	$644 (11+)	$591 (11+)
Scenario 3a (MPIC experience)	$532 (11+)	$700 (11+)	$647 (11+)
Scenario 1c (NB experience)	$312 (11+)	$438 (11+)	$397 (11+)
Scenario 2c (NB experience)	$337 (11+)	$488 (11+)	$437 (11+)
Scenario 3c (NB experience)	$381 (11+)	$537 (11+)	$484 (11+)
Cases with Claims Fluctuation, with Management Reaction			
Scenario 1b (MPIC experience)	$256 (9)	$380 (11+)	$336 (10)
Scenario 2b (MPIC experience)	$270 (9)	$406 (10)	$358 (10)
Scenario 3b (MPIC experience)	$301 (9)	$441 (11+)	$390 (10)
Scenario 1d (NB experience)	$217 (9)	$339 (10)	$296 (10)
Scenario 2d (NB experience)	$226 (8)	$367 (10)	$316 (9)
Scenario 3d (NB experience)	$257 (9)	$406 (10)	$353 (10)
To achieve positive equity, end of second year of operations only, randomized two-year claims experience, based on Scenario 3			
MPIC experience, 75th percentile	$112	N/A	N/A
MPIC experience, 95th percentile	$228	N/A	N/A
New Brunswick experience, 75th percentile	$92 $16 Debt	N/A	N/A
New Brunswick experience, 95th percentile	$183	N/A	N/A

The scenarios and claims experience iterations analyzed are further explored below.

Base Scenarios – No Claims Experience Fluctuation

The table below illustrates the high level comparison of results between the three scenarios for the base scenarios (those without fluctuations in claims experience year-to-year).

Summary	Scenario 1	Scenario 2	Scenario 3
Year of Positive Earnings	Year 3	Year 3	Year 3
Year of Positive Net Equity	Year 4	Year 4	Year 5
Year 10 Net Equity	$273 Million	$377 Million	$284 Million
Year meet MAT	Year 8	Year 8	Year 10
Year 10 MAT	7.5%	7.5%	2.3%
Year meet MCT	Year 7	Year 7	Year 8
Year 10 MCT	237%	240%	180%

The results above demonstrate that between Scenario 1 and 2, the assumptions used under Scenario 2 generate the more profitable operation over the 10 year period. Scenario 3 is the most challenging scenario where results demonstrate the "unfavourable case". The trend across each of the Scenarios is carried through the remaining analysis.

The difference between Scenario 1 and 2 would indicate that the impact of inflation and growth on the organization is minimal.

Impact of the Injection of Debt and Capital

As noted above in our methodology, there are a few benchmarks that gauge the impact on New Brunswick of adopting the public sector model. This section highlights what injection of capital or debt would allow the public insurance regime to satisfy the following tests:

1. Positive Net Equity through the initial 10 year period
2. Achieve 0% for the Minimum Asset Test
3. Achieve 100% for the Minimum Capital Test

Summary	Scenario 1	Scenario 2	Scenario 3
Positive Net Equity	$40 Million Capital $42 Million Debt	$37 Million Capital $45 Million Debt	$57 Million Capital $51 Million Debt
Positive MAT	$157 Million Capital	$158.5 Million Capital	$186 Million Capital
Positive MCT	$98 Million Capital	$98.5 Million Capital	$126 Million Capital

The table above illustrates that significant additional capital would be required to ensure that the MAT and MCT are met on a continual basis for the 10 year period. The earnings are virtually unchanged as a result of the injection of capital aside from the reduction in interest costs.

Fluctuating Claim Cost Experience (MPIC Data) – The "a" Iteration

The following table illustrates the strong impact that unfavorable claim cost trends will have on the financial results, if NBPI management does not react to above-trend claims experience. These results are based on MPIC trends.

Summary	Scenario 1a	Scenario 2a	Scenario 3a
Year of Positive Earnings	Not achieved Average Loss: $64.6 Million	Not achieved Average Loss: $76.5 Million	Not achieved Average Loss: $85.8 Million
Year of Positive Net Equity	Not achieved	Not achieved	Not achieved
Year 10 Net Equity	($646 Million)	($765 Million)	($ 859 Million)
Year meet MAT	Not achieved	Not achieved	Not achieved
Year 10 MAT	(55.9%)	(49.9%)	(54.5%)
Year meet MCT	Not achieved	Not achieved	Not achieved
Year 10 MCT	(506%)	(441%)	(494.5%)

The impact of unfavorable claim costs on the earnings and equity is very significant in these iterations. The annual losses are magnified between Scenario 1a and 2a, as more business is written under a money losing business model. As expected the Scenario 3a results are significantly worse that those in Scenario 1a and 2a primarily due to the increased start up costs and ongoing operational costs.

Impact of the Injection of Debt and Capital

The following table illustrates that very large investments capital would be required to ensure that the three tests are met for the ten year period, using the MPIC trend data.

Summary	Scenario 1a	Scenario 2a	Scenario 3a
Positive Net Equity	$402 Million Capital	$476 Million Capital	$532 Million Capital
Positive MAT	$525 Million Capital	$644 Million Capital	$700 Million Capital
Positive MCT	$487 Million Capital	$591 Million Capital	$647 Million Capital

Fluctuating Claims Cost Experience with Management Intervention (MPIC Data) – The "b" Iteration

Finally, recognizing that management will likely react to the negative claim cost fluctuations and posts a rate increase starting in Year 4, the "b" iterations produce the following results:

Summary	Scenario 1b	Scenario 2b	Scenario 3b
Year of Positive Earnings	Year 5	Year 5	Year 5
Year of Positive Net Equity	Year 10	Year 10	Year 10
Year 3 Net Equity	($235 Million)	($245 Million)	($275 Million)
Year 10 Net Equity	$ 916,000	$122 Million	$29 Million

Summary	Scenario 1b	Scenario 2b	Scenario 3b
Year meet MAT	Not achieved	Not achieved	Not achieved
Year 10 MAT	(13.6%)	(8.0%)	(12.4%)
Year meet MCT	Not achieved	Not achieved	Not achieved
Year 10 MCT	(2.4%)	62.3%	12.6%

The results of 1b and 2b show that although management has reacted, and earnings have turned around, the MAT and MCT are still not achieved as of the end of the ten year period. It is interesting to note the speed of recovery under Scenario 2b is greater than 1b, as demonstrated by looking at the comparative Year 3 and Year 10 results. As noted earlier, this is primarily caused by the assumptions used under the Scenario 2 series, relating to the level of premiums written.

In Scenario 3b the result are consistent with previous iterations.

Impact of the Injection of Debt and Capital

The following table illustrates the required capital injection at the start of operations to meet each of the tests in the event that management intervenes starting in Year 4 to increase rates.

Summary	Scenario 1b	Scenario 2b	Scenario 3b
Positive Net Equity required for first 3 Years	$215 Million	$224 Million	$249 Million
Positive Net Equity required for 10 Years	$256 Million	$270 Million	$301 Million
Positive MAT	$380 Million	$406 Million	$441 Million
Positive MCT	$336 Million	$358 Million	$390 Million

This demonstrates that the most challenging period, as expected, is the initial 3 year period (two years of operations) without any adjustment to rates beyond trend. The impact is comparatively small to get through the remaining 7 years once management makes the decision to adjust premiums. However, using the least stringent test (positive net equity), at least $120 million of capitalization – over the $82 – 108 million of start-up and pre-operating costs - is required to avoid a deficit in the early years in this unfavourable case.

Fluctuating Claim Cost Experience (NB Data) – The "c" Iteration

The following table illustrates using the New Brunswick claim cost trend, the impact on financial results, if NBPI management does not react to above-trend claims experience.

Summary	Scenario 1c	Scenario 2c	Scenario 3c
Year of Positive Earnings	Not achieved Average Loss: $44.2 Million	Year 9 only Average Loss: $47 Million	Not achieved Average Loss: $56 Million
Year of Positive Net Equity	Not achieved	Not achieved	Not achieved

Summary	Scenario 1c	Scenario 2c	Scenario 3c
Year 10 Net Equity	($442 Million)	($470 Million)	($564 Million)
Year meet MAT	Not achieved	Not achieved	Not achieved
Year 10 MAT	(44.5%)	(37.7%)	(42.5%)
Year meet MCT	Not achieved	Not achieved	Not achieved
Year 10 MCT	(357.4%)	(280%)	(335.5%)

The impact of unfavorable claim costs on the earnings and equity is less significant in these iterations than the MPIC iteration "a". This is primarily due to the milder trend history in New Brunswick. As with the MPIC iteration "a", the annual losses are magnified between Scenario 1c and 2c, as more business is written under a money losing business model.

Impact of the Injection of Debt and Capital

The following table illustrates that similar to the MPIC trend, the New Brunswick trend data generates very large requirements for investment capital to ensure that the three tests are met for the ten year period.

Summary	Scenario 1c	Scenario 2c	Scenario 3c
Positive Net Equity	$312 Million Capital	$337 Million Capital	$381 Million Capital
Positive MAT	$438 Million Capital	$488 Million Capital	$537 Million Capital
Positive MCT	$397 Million	$437 Million Capital	$484 Million Capital

Fluctuating Claims Cost Experience with Management Intervention (NB Data) – The "d" Iteration

Finally as in iteration "b" using the MPIC trends, iteration "d" will recognize that management will react to the negative claim cost fluctuations and post a 15% rate increase in Year 4 only. The New Brunswick trend does not necessitate any additional rate increase in Year 8. The "d" iterations produce the following results:

Summary	Scenario 1d	Scenario 2d	Scenario 3d
Year of Positive Earnings	Year 6	Year 6	Year 6
Year of Positive Net Equity	Year 10	Year 9	Year 10
Year 10 Net Equity	$59 Million	$198 Million	$104 Million
Year meet MAT	Not achieved	Not achieved	Not achieved
Year 10 MAT	(9.7%)	(3.9%)	(8.6%)
Year meet MCT	Not achieved	Year 10	Not achieved
Year 10 MCT	42.7%	109.6%	56.3%

The results of 1d and 2d show that although management has reacted, and earnings have turned around, the MAT and MCT are still not achieved as of the end of Year 9 and MCT is only achieved under 2d in Year 10.

In Scenario 3d the result are consistent with previous iterations.

Impact of the Injection of Debt and Capital

The following table illustrates the required capital injection at the start of operations to meet each of the tests in the event that management intervenes in Year 4 to increase rates.

Summary	Scenario 1d	Scenario 2d	Scenario 3d
Positive Net Equity required for 10 Years	$217 Million Capital	$226 Million Capital	$257 Million Capital
Positive MAT	$339 Million	$367 Million Capital	$406 Million Capital
Positive MCT	$296 Million	$316 Million Capital	$353 Million Capital

This demonstrates milder results to those under the MPIC trend data, however still significant investment requirements to meet the three tests through the ten year period.

To reiterate the caution voiced earlier in this report, the New Brunswick trend data is relevant to the extent that it is native experience, however it should be interpreted with caution as it is a fundamentally different delivery model and insurance product offering.

Randomized Claim Fluctuation Analysis

As noted above in Section 3.3.2, to identify what the impact of variations in experience on the trends in both the MPIC and New Brunswick data we have randomized claims experience in the first two years of operations only. Using the results under Scenario 3, the following table shows the comparative resulting capital requirements to sustain the operations to the end of Year 3 for the 75th percentile, the 95th percentile and iteration "c".

	75th Percentile	95th percentile	Scenario 3a	Scenario 3c
MPIC Experience Capital Requirement through Year 3	$112 Million Capital	$228 Million Capital	$268 Million Capital	N/A
New Brunswick Experience – Capital Requirement through Year 3	$92 Million Capital $16 Million Debt	$183 Million Capital	N/A	$238 Million Capital

The results show that as would be expected the 75th and 95th percentile results in a lower capital requirement than the trends in the above iterations "a" and "c". This analysis will simply allow a gauge of how steep the slope of increasing investment is required based on varying experience in claim costs.